CORNELL UNIVERSITY

NEW YORK STATE COLLEGE OF AGRICULTURE

TWO-YEAR COURSES

ADMINISTRATION

Edmund Ezra Day, Ph.D., LL.D., President of the University.
William Irving Myers, Ph.D., Dean of the College of Agriculture and Professor of Farm Finance.
Anson Wright Gibson, M.S., Director of Resident Instruction and Professor in Personnel Administration.
Lloyd R. Simons, B.S., Director of Extension and Professor in Extension Service.
Carl Edward Frederick Guterman, Ph.D., Director of Research, Director of the Cornell University Agricultural Experiment Station, and Professor of Plant Pathology.
Arthur John Heinicke, Ph.D., Director of the New York State Agricultural Experiment Station at Geneva and Professor of Pomology.
John Parker Hertel, Ph.D., Associate Professor in Personnel Administration and Secretary of the College.
Howard Styring Tyler, Ph.D., Associate Professor in Personnel Administration in charge of vocational guidance and placement.
Leigh H. Harden, M.S., Assistant Professor in Personnel Administration in charge of admissions.
Willard Waldo Ellis, A.B., LL.B., Librarian.
Ralph Hicks Wheeler, B.S., Director of Finance, Assistant Treasurer of the University, and Professor in Extension Service.
Arthur Howard Peterson, M.A., Assistant Director of Finance.

STAFF OF INSTRUCTION

Damon Boynton, Ph.D., Associate Professor of Pomology.
Robert Webster Bratton, Ph.D., Assistant Professor of Animal Husbandry.
Jacob Herbert Bruckner, Ph.D., Professor of Poultry Husbandry.
Jack Wheeler Caddick, B.S., Assistant in Floriculture.
Daniel Grover Clark, Ph.D., Associate Professor of Botany.
John Farnsworth Cornman, M.S.A., Instructor in Ornamental Horticulture.
Otis Freeman Curtis, Ph.D., Professor of Botany.
William Marshall Curtiss, Ph.D., Associate Professor of Marketing.
Herrell Franklin DeGraff, Ph.D., Associate Professor of Land Economics.
Mennick Truman Fossum, M.S., Assistant Professor of Floriculture.
Chester Higby Freeman, M.S.A., Assistant Professor of Extension Teaching.
Clara Louise Garrett, B.S., Assistant Professor of Drawing.

Alpheus Mansfield Goodman, B.S.A., Extension Professor of Agricultural Engineering.
Cedric Hay Guise, B.S., M.F., Professor of Forestry.
Goldan Orlando Hall, Ph.D., Professor of Poultry Husbandry.
Earle Volcart Hardenburg, Ph.D., Professor of Vegetable Crops.
Herbert Bertsch Hartwig, Ph.D., Professor of Field Crops.
Gustav Frederick Heuser, Ph.D., Professor of Poultry Husbandry.
Melvin Butler Hoffman, Ph.D., Extension Professor of Pomology.
Burton Aaron Jennings, B.S., Professor of Agricultural Engineering.
George Clarence Kent, Ph.D., Professor of Plant Pathology.
Curtis Gilbert Keyes, M.S., Instructor in Floriculture.
Lewis Knudson, Ph.D., Professor of Botany.
George H. M. Lawrence, Ph.D., Assistant Professor of Botany and Horticulture, Bailey Hortorium.
Francis Asbury Lueder, jr., B.S., Instructor in Agricultural Engineering.
Laurence Howland MacDaniels, Ph.D., Professor of Horticulture.
Matthew Leslie McMahon, B.S.A., Assistant in Pomology.
John Ivan Miller, Ph.D., Professor of Animal Husbandry.
Richard Alan Mordoff, Ph.D., Professor of Meteorology.
Charles Lawrence Norton, Ph.D., Instructor in Animal Husbandry.
George Eric Peabody, M.S., Professor of Extension Teaching.
Loren Clifford Petry, Ph.D., Professor of Botany.
Joseph Pullman Porter, B.S., M.S.A., M.L.D., Associate Professor of Ornamental Horticulture.
Kenneth Post, Ph.D., Associate Professor of Floriculture.
Whiton Powell, Ph.D., Professor of Business Management.
Alfred M. S. Pridham, Ph.D., Assistant Professor of Ornamental Horticulture.
Marius Peter Rasmussen, Ph.D., Professor of Marketing.
Philip Adna Readio, Ph.D., Professor of Economic Entomology.
Howard Wait Riley, M.E., Professor of Agricultural Engineering.
Louis Michael Roehl, B.S., Professor of Farm Mechanics.
Glenn Wade Salisbury, Ph.D., Professor of Animal Husbandry.
Cecil D. Schutt, Instructor in Animal Husbandry.
Robert Mumford Smock, Ph.D., Associate Professor of Pomology.
Franklin Wallburg Southwick, Ph.D., Extension Assistant Professor of Pomology.
Arless Asman Spielman, Ph.D., Assistant Professor of Animal Husbandry.
Clifford Nicks Stark, Ph.D., Professor of Bacteriology.
Kenneth Leroy Turk, Ph.D., Professor of Animal Husbandry.
Leon John Tyler, Ph.D., Associate Professor of Plant Pathology.
Stanley Whitson Warren, Ph.D., Professor of Farm Management.
Donald Stuart Welch, Ph.D., Professor of Plant Pathology.
John Peter Willman, Ph.D., Professor of Animal Husbandry.
Asahel Davis Woodruff, Ph.D., Assistant Professor of Rural Education.
Paul Work, Ph.D., Professor of Vegetable Crops.

THE New York State College of Agriculture is maintained by the State as one of three state colleges within Cornell University. It is equipped with a staff and facilities to teach resident students, to make investigations in all phases of agriculture and the underlying sciences, and to disseminate its teachings to the people of the State. The support of the State towards these ends is supplemented by substantial appropriations from the Federal Government, and by the land and other large facilities and services freely placed at the disposal of the College by Cornell University.

THE COURSES AVAILABLE

The information contained in this announcement relates to the two-year courses. These are designed for young men who expect to go into farming or into business closely allied thereto, and who desire agricultural training of college grade, but cannot devote more than two years to it. The College offers, in addition, a summer session of six weeks; a four-year course, leading to the degree of bachelor of science; and graduate courses, leading to higher degrees. These offerings give preparation for different kinds and different levels of agricultural vocations and call for different prerequisites for admission. A separate printed announcement of each of these courses is available on application to the Secretary of the College of Agriculture, Roberts Hall, Ithaca, New York.

VETERANS' EDUCATION

Veterans who qualify for educational benefits under Public Laws 16 (Rehabilitation Act) and 346 ("G. I. Bill of Rights") may write to the Office of Veterans Education, Cornell University, Ithaca, New York, and request a Veterans Manual for information concerning the use of these benefits at Cornell University.

REQUIREMENTS FOR ADMISSION

For admission to the two-year courses, candidates must offer:

Fifteen units acceptable to Cornell University in subjects credited by the University of the State of New York toward a state diploma, or in the case of applicants whose secondary-school training has been outside New York State, the equivalent by school certificates. English, 4 years, is counted as 3 units.

Approximately one year of practical experience on a farm or in a business related to the curriculum to be followed.

Certificates of good moral character.

All students matriculating in the University must present a satisfactory certificate of vaccination against smallpox. This certificate is considered satisfactory only if it certifies to a successful vaccination within five years, or certifies that at least three unsuccessful attempts have been made within the same period.

THE APPLICATION FOR ADMISSION

Candidates for admission should address the Director of Admissions, McGraw Hall, Ithaca, New York, stating that they desire to enter one of the two-year courses in the College of Agriculture. This should be done as early as possible, because the procuring of the necessary credentials often takes considerable time.

Every candidate for admission in September must make a deposit of $25 before August 1. A check, draft, or money order should be made payable to Cornell University and sent to the Office of Admissions, McGraw Hall, Ithaca, New York.

If the candidate matriculates, the deposit will be credited to his account, $13 for the matriculation fee, and $12 as a guaranty fund, which every two-year student is required to maintain, and which is to be refunded to him upon his permanent withdrawal, less any indebtedness to the University.

If admission is denied a candidate who has complied with these rules, the deposit is refunded in full at any time.

The application may be withdrawn and the refund of deposit claimed before August 1 without charge. After August 1 but before college opens, a charge of $10 is made against the deposit for accrued expenses. After college opens no refund is allowed.

CERTIFICATE ON COMPLETION OF COURSE

Students who satisfactorily complete the work of an approved two-year course with credit for at least sixty hours, will be granted an appropriate certificate.

RELATION TO FOUR-YEAR COURSE

Except in respect to the items of administration and curriculum specifically covered in this announcement, students in the two-year course are governed by exactly the same conditions as are students of the

four-year course. They should, therefore, consult the announcement of the latter course for further details of information and for the description of courses open to their election but not here listed or described.

Transfer to the degree course will be possible at the end of the two-year course for those who have given evidence of ability to carry advanced work. Students who qualify for such transfer will not be required to offer any further entrance credit. The transfer is possible solely on a basis of the full two-year record, which must be considerably better than the average of all two-year students. Students who transfer from the two-year to the four-year course are given full credit toward the degree for work satisfactorily passed in the two-year course.

Two-year students are registered as special students and are not eligible to represent the University in intercollegiate athletics.

EXPENSES

TUITION

Tuition is free to two-year students in the New York State College of Agriculture, who at the time of their admission are, and for at least twelve months prior thereto have been, bona-fide residents of the State of New York. A student transferring from one college or course in the University to another, must pay for the hours credit he receives in the latter college or course an amount corresponding to the difference in tuition; and no such transfer is allowed or credit given until such payment has been made.

Students in agriculture who are not exempt under these provisions are required to pay $150 a term. Tuition and other fees become due when the student registers. The University allows twenty days of grace after the last registration day of each term of the regular session. The last day of grace is generally printed on the registration coupon which the student is required to present at the Treasurer's office. Any student, graduate or undergraduate, except as hereinafter provided, who fails to pay his tuition, fees, and other indebtedness, or if entitled to free tuition fails to claim the same at the Treasurer's office and pay his other fees, within the time prescribed by the University is thereby dropped from the University. When in his judgment the circumstances in a particular case so warrant, the Treasurer may allow an extension of time to complete payments. For such extension, the student will be assessed a fee of $2. A financial reinstatement fee of $5 will be assessed in the case of any student who is permitted to continue or return to classes after being dropped from the University for default in payments. For reasons satisfactory to the Trea-

surer and the Registrar, which must be presented in writing, the above assessment may be waived in any individual case.

Any tuition or other fee may be changed by the Board of Trustees to take effect at any time without previous notice.

OTHER FEES

A matriculation fee of $13 is required of every student upon entrance into the University. A new two-year student who has made the required deposit of $25 with the Treasurer does not make an additional payment of the matriculation fee, because the Treasurer draws on the deposit for this fee.

A health and infirmary fee of $10 a term is required at the beginning of each term of every student. For a statement of the privileges given in return for this fee, read what is said about the Student Clinic and Infirmary in the *General Information* booklet.

A Willard Straight Hall membership fee of $5 is required at the beginning of each term. Its payment entitles the student to a share in the common privileges afforded by the operation of Willard Straight Hall, subject to the regulations made by the Board of Managers.

A physical recreation fee of $4, required at the beginning of each term, entitles the student to the use of a locker, bathing facilities, and towels, in the gymnasium, Barton Hall, or the Schoellkopf Memorial Building.

A University administration and endowed college laboratory fee of $8.50 a term is required of every student in the state colleges at the beginning of each term.

A laboratory and library fee of $9 a term is required of every student in the College of Agriculture at the beginning of each term to cover the cost of materials used in laboratory and field work and for the use of the library. A few courses involve out-of-town trips. The student must pay his own travel and living expenses on those trips.

BOARD AND LODGING

HALLS AND LODGING FOR MEN

Approximately one thousand rooms will be available for the fall term in University Residential Halls for men. In addition, many private lodging houses near the University offer furnished rooms, with heat and light, at rates ranging from $4 to $8 a week for a single room. Before he rents a room in a private house, a student should make sure, by a personal inspection, that the sanitary arrangements of the house are good, and he

should especially insist on a good fire escape. The University publishes a list of lodging houses that have been inspected and found to be satisfactory in the above respects. New students, if they have not already engaged rooms, are advised to come to Ithaca a few days before the day of registration. All inquiries about rooms for men or for rooms in men's dormitories should be addressed to Manager of Residential Halls, Morrill Hall, Ithaca, New York.

Students rooming in private houses will enter into written contracts. The details of these agreements should be clearly understood at the outset.

The number of private houses that offer both room and board is small, and most students get their meals outside the houses where they live. The College of Home Economics operates a cafeteria in Martha Van Rensselaer Hall. Other good cafeterias also are patronized mainly by the students.

Board and lodging may be obtained in Ithaca for $15 a week, but this amount would best be regarded as the lowest practicable allowance.

THE TWO-YEAR CURRICULA

THE two-year course has organized within it nine curricula giving preparation for the major types of farming in New York State and for certain allied businesses. A two-year student must select one of these curricula and follow closely the work as outlined. Changes from these outlines may be made with the consent of the Director of Resident Instruction and the faculty adviser to whom the student will be assigned when he registers.

All two-year men students must register for the Basic Course in Military Science and Tactics. Men and women are required to register for Physical Training. These courses are described in the announcements of the four-year course.

Requests for further information regarding these curricula should be addressed to the Secretary of the College of Agriculture, Roberts Hall, Ithaca, New York.

CURRICULUM IN DAIRY FARMING

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Animal Husbandry 1 (Introduction to Animal Husbandry)	3
Agricultural Economics 2 (Agricultural Geography)	3
Bacteriology 3 (Agricultural)	3
*Chemistry 102 (General)	3

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Animal Husbandry 10 (Livestock Feeding)	4
Animal Husbandry 50 (Dairy Cattle)	3
*Chemistry 102 (General)	3
Agronomy 2 (Introduction to Field Crops)	3

SECOND YEAR

Animal Husbandry 20 (Animal Breeding)	3
Animal Husbandry 30 (Health and Diseases of Animals)	3
Agronomy 6 (Soils)	3
Agricultural Engineering 1 (Farm Mechanics)	3
Agricultural Elective	3
Agricultural Economics 102 (Farm Management)	5
Animal Husbandry 150 (Dairy Cattle, Advanced Course)	3
Agricultural Engineering 40 (Farm Shop Work)	2
Agricultural Elective	6

CURRICULUM IN GENERAL LIVESTOCK FARMING

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Animal Husbandry 1 (Introduction to Animal Husbandry)	3
Agricultural Engineering 40 (Farm Shop Work)	2
Bacteriology 3 (Agricultural)	3
*Chemistry 102 (General)	3

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Animal Husbandry 10 (Livestock Feeding)	4
Agronomy 2 (Introduction to Field Crops)	3
*Chemistry 102 (General)	3
Agricultural Elective	3
Suggested Animal Husbandry 50, 60	

*Those who offer Chemistry for entrance may substitute six credit hours of courses in Agriculture for Chemistry.

SECOND YEAR

Fall term	*Hours credit*
Animal Husbandry 20 (Animal Breeding)	3
Animal Husbandry 30 (Health and Diseases of Animals)	3
Animal Husbandry 80 (Sheep)	3
Agronomy 6 (Soils)	3
Agricultural Engineering 1 (Farm Mechanics)	3

Spring term	*Hours credit*
Agricultural Economics 102 (Farm Management)	5
Agricultural Elective	10
Suggested	
Agricultural Engineering 103	
Animal Husbandry 70, 90	
Entomology 41	
Vegetable Crops 2	
Pomology 1	

CURRICULUM IN POULTRY FARMING

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Poultry Husbandry 1 (Farm Poultry)	3
Bacteriology 3 (Agricultural)	3
Agricultural Engineering 40 (Farm Shop Work)	2
*Chemistry 102 (General)	3

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Poultry Husbandry 30 (Incubation and Brooding)	3
Agricultural Engineering 1 (Farm Mechanics)	3
Agronomy 2 (Introduction to Field Crops)	3
Poultry 50 (Market Eggs and Poultry)	2
*Chemistry 102 (General)	3

SECOND YEAR

Poultry Husbandry 20 (Breeds, Breeding, and Judging)	3
Agronomy 6 (Soils)	3
Agricultural Engineering 31 (Farm Structures)	3
Agricultural Elective	6

Agricultural Economics 102 (Farm Management)	5
Pomology 1 (General)	3
Poultry Husbandry 110 (Poultry Nutrition)	3
Agricultural Economics 144 (Marketing Poultry Products)	3

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CURRICULUM IN FRUIT GROWING

FIRST YEAR

Fall term	*Hours credit*	*Spring term*	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3	Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3	Botany 1	3
Animal Husbandry 1 (Introduction to Animal Husbandry)	3	Pomology 1 (General)	3
Agricultural Economics 2 (Agricultural Geography)	3	Agricultural Engineering 1 (Farm Mechanics)	3
Chemistry 102 (General)	3	Chemistry 102 (General)	3

SECOND YEAR

Pomology 111 (Handling, Storage, and Utilization of Fruit)	3	Agricultural Economics 102 (Farm Management)	5
Agronomy 6 (Soils)	3	Plant Pathology 1 (Elementary)	3
Agricultural Economics 142 (Marketing Fruits and Vegetables)	4	Entomology 41 (General Economic)	3
Botany 31 (Plant Physiology)	4	Pomology 112 (Advanced Laboratory Course)	2
Pomology 102 (Fruit Varieties)	3	Pomology 131 (Advanced)	4

CURRICULUM IN VEGETABLE GROWING

FIRST YEAR

Fall term	*Hours credit*	*Spring term*	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3	Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3	Vegetable Crops 1	3
Agricultural Engineering 1 (Farm Mechanics)	3	Entomology 41 (General Economic)	3
*Chemistry 102 (General)	3	*Chemistry 102 (General)	3
Agricultural Elective	3	Agricultural Elective	3

SECOND YEAR

Vegetable Crops 12 (Grading and Handling)	3	Agricultural Economics 102 (Farm Management)	5
Plant Pathology 1 (Elementary)	3	Vegetable Crops 2 (Special Cash Crops)	3
Agronomy 6 (Soils)	3	Agronomy 2 (Introduction to Field Crops)	3
Agricultural Elective	6	Agricultural Elective	4
		Suggested Animal Husbandry 10 Pomology 1 Meteorology 1	

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CURRICULUM IN GENERAL FARMING

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Bacteriology 3 (Agricultural)	3
Agricultural Engineering 1 (Farm Mechanics)	3
*Chemistry 102 (General)	3
Agricultural Elective	3
Suggested	
Agricultural Economics 2	
Poultry Husbandry 1	
Animal Husbandry 1	
Botany 1	

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Animal Husbandry 10 (Livestock Feeding)	4
Agronomy 2 (Introduction to Field Crops)	3
*Chemistry 102 (General)	3
Agricultural Elective	3
Suggested	
Entomology 41	
Pomology 1	
Vegetable Crops 2	
Botany 1	

SECOND YEAR

Agronomy 6 (Soils)	3
Agricultural Elective	12
Suggested	
Agricultural Engineering 31, 40, 102	
Animal Husbandry 20	
Forestry 1	
Plant Pathology 1	

Animal Husbandry 50 (Dairy Cattle)	3
Agricultural Economics 102 (Farm Management)	5
Agricultural Elective	6
Suggested	
Agricultural Economics 126	
Agricultural Engineering 103	

CURRICULUM IN THE MARKETING OF FRUITS AND VEGETABLES

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3
Vegetable Crops 12 (Grading and Handling)	3
*Chemistry 102 (General)	3
Agricultural Elective	3
Suggested	
Agricultural Economics 2	
Agricultural Engineering 1	

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Pomology 1 (General)	3
Entomology 41 (General Economic)	3
*Chemistry 102 (General)	3
Vegetable Crops 1	3

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SECOND YEAR

Fall term	*Hours credit*
Pomology 111 (Handling, Storage, and Utilization of Fruit)	3
Agricultural Economics 142 (Marketing Fruits and Vegetables)	4
Plant Pathology 1 (Elementary)	3
Agronomy 6 (Soils)	3
Agricultural Elective	3
Suggested	
Pomology 102	

Spring term	*Hours credit*
Vegetable Crops 2 (Special Cash Crops)	3
Agricultural Economics 102 (Farm Management)	5
Agricultural Economics and Farm Management 126 (Farmers' Cooperatives)	3
Agricultural Elective	3
Suggested	
Agricultural Economics 122	
Meteorology 1	

CURRICULUM IN COMMERCIAL FLORICULTURE

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3
Floriculture and Ornamental Horticulture 1 (General)	3
Chemistry 102 (General)	3
Agricultural Elective	3
Suggested	
Agricultural Economics 2	
Agricultural Engineering 40	

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3
Floriculture and Ornamental Horticulture 2 (Introduction to Landscape Design)	3
Floriculture and Ornamental Horticulture 5 (Flower Arrangement)	2
Entomology 41 (General Economic)	3
Chemistry 102 (General)	3

SECOND YEAR

Floriculture and Ornamental Horticulture 123 (Florist Crop Production)	4
Floriculture and Ornamental Horticulture 115 (Plant Propagation)	3
Botany 31 (Plant Physiology)	4
Floriculture and Ornamental Horticulture 10 (Taxonomy of Cultivated Plants)	3
Agricultural Elective	3
Floriculture and Ornamental Horticulture 124 (Commercial Greenhouse Production)	3
Floriculture and Ornamental Horticulture 125 (Flower-Store Management)	2
Plant Pathology 1 (Elementary)	3
Floriculture and Ornamental Horticulture 12 (Herbaceous Plant Materials)	3
Agricultural Elective	4
Suggested	
Rural Education 110	

CURRICULUM IN NURSERY LANDSCAPE SERVICE

Students who take this curriculum must enroll in the six-weeks Summer Session at Cornell University between the first and second years. Tuition is charged in the Summer Session.

FIRST YEAR

Fall term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3
Floriculture and Ornamental Horticulture 1 (General)	3
Floriculture and Ornamental Horticulture 10 (Taxonomy of Cultivated Plants)	3
*Chemistry 102 (General)	3
Agricultural Elective	3

Spring term	*Hours credit*
Extension Teaching 1 (Oral and Written Expression)	3
Botany 1	3
Drawing 10 (Free-Hand)	2
Floriculture and Ornamental Horticulture 2 (Introduction to Landscape Design)	3
*Chemistry 102 (General)	3
Botany 31 (Plant Physiology)	4

SUMMER SESSION

Floriculture and Ornamental Horticulture A 12 (Herbaceous Plant Materials)	2
Floriculture and Ornamental Horticulture A 13 (Woody Plant Materials for Landscape Planting)	3
Floriculture and Ornamental Horticulture A 118 (Landscape Construction)	2

SECOND YEAR

Plant Pathology 1 (Elementary)	3
Agronomy 6 (Soils)	3
Floriculture and Ornamental Horticulture 115 (Plant Propagation)	3
Floriculture and Ornamental Horticulture 32 (Elementary Design and Planting of Small Properties)	3
Agricultural Elective	3
Suggested Floriculture and Ornamental Horticulture 119	

Floriculture and Ornamental Horticulture 13 (Woody-Plant Materials)	4
Floriculture and Ornamental Horticulture 12 (Herbaceous Plant Materials)	3
Floriculture and Ornamental Horticulture 114 (Turf)	2
Floriculture and Ornamental Horticulture 117 (Commercial Nursery Management)	3
Agricultural Elective	3
Suggested Drawing 11	

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DESCRIPTION OF COURSES

THE courses described in the following pages are those required in one or more of the preceding curricula. They are given by members of the staff of the College of Agriculture. The course in chemistry is described in the *Announcement of the College of Arts and Sciences* or its supplements.

The administrative units of the College in charge of the various subject matter fields are called *departments*. The work given in several of the departments is not required in these two-year curricula, but the courses offered by them may be elected as time permits and if the prerequisites are met. For the description of these offerings reference should be made to the announcement of the four-year courses.

The arrangement of the courses in the foregoing curricula is such that prerequisites will have been met if the courses are taken in the order in which they are listed. One should consult the four-year announcement for course prerequisites before making any change in the order of scheduling.

SUBSEQUENT TO SENDING COPY FOR THIS ANNOUNCEMENT TO THE PRINTER, THE STARTING TIME OF ALL LABORATORIES SCHEDULED TO COMMENCE AT 1:40 P. M., AND CLOSE AT 4 P. M., WAS CHANGED BY UNIVERSITY FACULTY ACTION TO 2 P. M.

AGRICULTURAL ECONOMICS

2. *AGRICULTURAL GEOGRAPHY.* Fall term. Credit three hours. Lectures, W F 9 or 11. Warren 25. Laboratory T W Th or F 2–4 or W Th 7–9. Warren 101. Associate Professor DEGRAFF.

Historical perspective on present-day agriculture; adjustment of agriculture to natural and to economic environment; crop and livestock production in New York State, the United States, and other countries; interregional trade in agricultural products.

102. *FARM MANAGEMENT.* Spring term. Credit five hours. Not open to first-year students. Lectures, M W F 10. Warren 25. Laboratory, T W Th or F 1.40–4. Warren 101. On days when farms are visited, the laboratory period is from 1.40–6. Professor WARREN.

Farming as a business; farm accounts; factors affecting profits; size of business; choice of enterprises; forms of tenure and leases; methods of getting started in farming; choosing a farm; planning the organization and management of specific farms. One all-day trip and four half-day trips are taken to visit farms in nearby-regions.

120. *PERSONAL FINANCIAL MANAGEMENT.* Spring term. Credit three hours. Lectures, T Th 8. Warren 225. Discussion, T 1.40–4. Warren 240. Associate Professor CURTISS.

Planning an individual's financial program; sources and terms of credit; savings and investments; insurance of property and income; acquisition and disposition of property; provision for dependents.

122. *ACCOUNTING METHOD.* Spring term. Credit three hours. Lectures, M W 11. Warren 225. Practice period, T 1.40–4. Warren 201. Professor POWELL.

For persons who wish to understand the records and procedures commonly used in keeping accounts of cooperatives and other businesses. Recording business transactions and deriving financial statements, analysis of costs and budgets.

126. *FARMERS' COOPERATIVES.* Spring term. Credit three hours. Lectures, M W 8. Warren 225. Discussion, M 1.40–4. Warren 201. Professor POWELL.

The business management of farmers' cooperatives. How cooperatives differ from other forms of business organization. Policies and practices involved in forming cooperatives, organization of personnel, finances, marketing, efficiency of operations, relationships with members and with the public.

142. *MARKETING FRUITS AND VEGETABLES.* Fall term. Credit four hours. Lectures, M W F 9. Warren 225. Laboratory: for undergraduate students, W 2–4; for graduate students, F 2–4. Warren 240. Professor RASMUSSEN.

A study of the economic factors involved in the marketing of fruits and vegetables. Regional and seasonal competition; areas of distribution; methods of handling; costs of marketing; types of marketing organizations; sales methods; transportation and carrier services; produce law and methods of credit rating; terminal problems; aspects of retailer- and consumer-demand.

144. *MARKETING POULTRY, EGGS, AND LIVESTOCK.* Spring term. Credit three hours. Lectures, T Th 10. Warren 225. Laboratory, Th 1.40–4. Warren 201. Associate Professor CURTISS.

A study of the economic factors involved in the marketing of eggs, poultry, hogs, cattle, sheep, and wool. Subjects to be considered include: areas of production; distribution channels; sales methods; market costs; cold-storage operations; legislation; demand; terminal market; and consumption problems.

AGRICULTURAL ENGINEERING

1. *FARM MECHANICS.* Fall or spring term. Credit three hours. Lectures: fall term, T Th 9. Dairy Industry Building 218. Practice, M T W 1.40–4 or S 8–10.30. Agricultural Engineering Laboratories. Professor JENNINGS and assistants.

A course planned to give training in understanding the farm application of mechanical methods and appliances and to develop ability to think and to reason in terms of these.

102. *FARM POWER.* Fall term. Credit three hours. Prerequisite, a reasonable proficiency in drawing. Lectures, T Th 11. Caldwell 100. Recitations, F 9 10 11 or 12. Practice, M T W or Th 1.40–4. Agricultural Engineering Laboratories. Professor JENNINGS.

A study of the principles of operation and adjustments of single-cylinder and multicylinder engines and the care, repair, and adjustments of modern farm tractors.

103. *FIELD MACHINERY.* Spring term. Credit three hours. Prerequisite, a reasonable proficiency in drawing. Lectures, T Th 11. Caldwell 100. Recitations, F 9 10 11 or 12. Practice, M T W or Th 1.40–4. Agricultural Engineering Laboratories. Professor JENNINGS and assistants.

A study of the use, care, operation, adjustment, and repair of farm machinery, such as plows, drills, binders, combines, sprayers, potato diggers, and the like. Horse-drawn, as well as tractor, equipment is included. The selection of the size and the type of field equipment best adapted for a specified size of farm is considered.

21. *FARM ENGINEERING.* Fall or spring term. Credit three hours. Lectures: fall term. M W 9; spring term, M W 10. Dairy Industry Building 119. Practice, M or T 1.40–4. Dairy Industry Building, Fourth Floor, and field. Professor ————.

A study of the practical solution of the elementary problems involved in connection with surveying and mapping the farm; leveling for farm drainage and water supply; laying out building foundations. Farm drainage, concrete, and sewage disposal are studied.

31. *FARM STRUCTURES.* Fall term. Credit three hours. Lectures, M W F 8. Fernow 122. Extension Professor GOODMAN.

A study of the plan and structure of the buildings suited to various types of farming, with emphasis on construction, remodeling, insulation, and ventilation.

40. *FARM SHOP WORK.* Fall or spring term. Credit two hours a term. Section 1, T Th 1.40–4; section 2, M F 1.40–4. Agricultural Engineering Laboratories. Professor ROEHL.

This course includes woodworking with special jobs in carpentry, cabinet making, and fitting tool handles; metal working, with special jobs in saw fitting, tool grinding, cold-metal working, sheet-metal working, selecting and attaching builders' hardware; forge work, with special jobs in shaping and tempering tools; painting, with special jobs in repairing and refinishing furniture; harness repairing; problems in the use of rope. Mechanical drawing and free-hand sketching are done as they supplement the work.

AGRONOMY

[A. *INTRODUCTORY AGRONOMY.* Fall term. Credit three hours. Professor ————.] Not given in 1946–1947.

An introductory study emphasizing the practical problems of soil and field-crop management.

2. *INTRODUCTION TO FIELD CROPS.* Spring term. Credit three hours. Discussion period, W F 11. Laboratory, M 1.40–4. Caldwell 100. Professor HARTWIG.

A study of the culture of the common field crops that are produced in the Northeastern States, with emphasis on the practical aspects. Rotations with their seed and fertilizer requirements are worked out for three or four type-farms where the objective is to produce feed and food.

6. *SOILS.* Fall term. Credit three hours. Lectures and recitations, M W F 10. Comstock 245. Laboratory, F 1.40–4. Caldwell 143. Professor ————.

A course dealing with the composition, properties, and plant relationships of soils, with particular reference to the practical use of lime, fertilizers, and other means of maintaining soil fertility and of controlling soil erosion.

ANIMAL HUSBANDRY

1. *INTRODUCTION TO ANIMAL HUSBANDRY.* Fall term. Credit three hours. Lectures, W F 10. Wing A. Laboratory, T or F 1.40–4. Judging Pavilion. Professors MILLER, SALISBURY, TURK, and J. P. WILLMAN, and assistants. Professor WILLMAN has charge of the course records.

Introduction to types, breeds, judging, and management of livestock.

10. *LIVESTOCK FEEDING.* Spring term. Credit four hours. Lectures, M W F 9. Wing A. Laboratory, W Th or F 1.40–4. Wing C. Professor MILLER and assistants.

The feeding of farm animals, including the general basic principles, feeding standards, the computation of rations, and the composition and nutritive value of livestock feeds.

20. *ANIMAL BREEDING.* Fall term. Credit three hours. Lectures, M W 9. Wing A. Recitation, demonstration, or laboratory, T 1.40–4. Wing C. Professor SALISBURY and Assistant Professor BRATTON and assistants.

A general outline of the principles of physiology and heredity as applied to the breeding of farm animals.

30. *HEALTH AND DISEASES OF ANIMALS.* Fall term. Credit three hours. Lectures, M W F 11. Veterinary College. Professor BIRCH.

The course is designed to give the student a clear conception of the causes and nature of the diseases of animals, with suggestions for their prevention. Special attention is given to the methods of preventing the spread of infectious and epizootic diseases. Such information as is practicable is given for the treatment of slight injuries and for first aid in emergencies.

50. *DAIRY CATTLE.* Spring term. Credit three hours. Lectures, T Th 10. Wing A. Practice, M or Th 1.40–4. Wing A and Judging Pavilion. Professor TURK, Doctor C. L. NORTON, and assistants.

Origin, history, and development of the breeds of dairy cattle; methods of breeding, economy of feeding; production of milk; care, management, and sanitation of the dairy herd. Practice in herd management, formulating of rations, planning of breeding programs, and keeping records.

150. *ADVANCED DAIRY PRODUCTION.* Spring term. Credit three hours. Lectures, T Th 11. Lecture and discussion, T 1.40–4. Wing E. Assistant Professor SPIELMAN.

Analysis of breeding and management programs in successful herds. Evaluation of the programs of dairy-cattle breed associations. Emphasis is placed on the application

of the principles of dairy breeding, feeding, and management to the development and operation of a successful dairy farm.

60. *BEEF CATTLE.* Spring term. Credit three hours. Lectures, W F 10. Wing B. Laboratory, F 1.40–4. Judging Pavilion. Professor MILLER.

Origin, history, and development of the breeds of beef cattle; herd management; feeding for fattening; practice in judging. Lectures, recitations, discussions, reports, tracing of pedigrees, and field trips. Field trips, two and one-half days total; estimated cost, $6.

70. *SWINE.* Spring term. Credit three hours. Lectures, W F 11. Wing B. Practice, T 1.40–4. Judging Pavilion and Swine Barn. Professor J. P. WILLMAN.

A general course in the care, feeding, breeding, and management of swine. Lectures, recitations, and discussions; studies in swine selection; field trips and practical exercises in the handling and care of swine. One-day field trip; estimated cost, $4.

80. *SHEEP.* Fall term. Credit three hours. Lectures, T Th 10. Wing B. Practice, M 1.40–4. Judging Pavilion and Sheep Barn. Professor J. P. WILLMAN.

A general course in the care, breeding, feeding, and management of the farm flock; feeding and fattening of lambs; practice in judging and handling of sheep and wool. Lectures, recitations, demonstrations, discussions, reports, and field trips intended to give students a practical knowledge of sheep production. One-day field trip, estimated cost, $4.

90. *MEAT AND MEAT PRODUCTS.* Fall or spring term. Credit three hours. Lecture, M 8. Wing B. Two laboratory periods a week, one slaughter section, and one cutting section. Slaughter section, W 1.40–4. Cutting section, M 1.40–4. Professor MILLER and Mr. SCHUTT.

A course in the slaughtering of farm animals, the cutting of carcasses, and the preparing and curing of meats.

BACTERIOLOGY

3. *AGRICULTURAL BACTERIOLOGY.* Fall term. Credit three hours. Lectures, M W F 9. Dairy Industry Building 218. Professor STARK.

The elements of bacteriology, with a survey of the relation of microorganisms to agriculture.

BOTANY

1. *GENERAL BOTANY.* Fall and spring terms. Credit three hours a term. Lectures, T Th 9 or 11. Plant Science 233. Laboratory, one period of two and one-half hours. Plant Science 240, 242, and 262. Professor PETRY, instructors, and assistants.

A survey of the fundamental facts and principles of plant life. The work of the first term deals with the structures and functions of the higher plants, with special emphasis on their nutrition. The work of the second term traces the evolution of the plant kingdom, as illustrated by representatives of the principal groups, and concludes with a brief introduction to the principles of classification of the flowering plants.

31. *PLANT PHYSIOLOGY.* Fall or spring term. Credit four hours. Lectures, T Th 10. Plant Science 141. Laboratory, T Th or W F 1.40–4. Plant Science 227. Professor KNUDSON, Professor O. F. CURTIS, or Associate Professor CLARK, and assistants.

This course is designed to acquaint the student with the general principles of plant

physiology. Topics such as water relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, growth, and reproduction are studied in detail. Particular emphasis is placed, both in laboratory and classroom, on the discussion of principles and their application to plants.

DRAWING

10. *FREE-HAND DRAWING.* Fall or spring term. Credit two hours. Practice, W 1.40–3.40. Other hours to be arranged. East Roberts 371. Assistant Professor GARRETT and Mr. ————.

A course in graphic expression for beginners in landscape design, including some mechanical drawing, lettering, and perspective.

11. *FREE-HAND DRAWING.* Fall or spring term. Credit from two to four hours. Hours to be arranged in any of the following periods: M T Th 9–12.50, W 9–12.50, 1.40–3.40, F 8–12.50. East Roberts 371. Assistant Professor GARRETT and Mr. ————.

An elementary course in representation for the development of graphic expression, particularly as applied to scientific studies and domestic arts. The course is planned to aid students who expect to enter the fields of teaching, nature study, biological research, rural sociology, and home economics. It includes the drawing in pen and pencil of subjects within the student's special field of interest, some study of lettering and free-hand perspective.

ENTOMOLOGY

41. *GENERAL ECONOMIC ENTOMOLOGY.* Spring term. Credit three hours. Lectures, T Th 9. Comstock 145. Professor READIO. Practical exercises, M Th or F 1.40–4. Comstock 100. Professor READIO and assistants.

Lectures on the life histories and habits of injurious insects, and on the methods of control; practical exercises on the commoner pests and the more important insecticides, as time permits; several field excursions.

EXTENSION TEACHING

1. *ORAL AND WRITTEN EXPRESSION.* Throughout the year. Credit three hours a term. Lectures and practice: fall term, M W F 8 or 11, T Th S 10; spring term, M W F 8 or 11. Roberts 131. Criticism, by appointment, daily 8–4, and S 8–1. Professor PEABODY, Assistant Professor FREEMAN, and Mr. LUEDER.

Practice in oral and written presentation of topics in agriculture, with criticism and individual appointments on the technic of public speech. Designed to encourage interest in public affairs, and, through demonstrations and the use of graphic materials and other forms, to train for effective self-expression in public. Special training is given to competitors for the Eastman Prizes for Public Speaking and the Rice Debate Stage. In addition, some study is made of representative works in English literature. Part of the work in the second term is a study of parliamentary practice.

FLORICULTURE AND ORNAMENTAL HORTICULTURE

1. *GENERAL FLORICULTURE AND ORNAMENTAL HORTICULTURE.* Fall term. Credit three hours. Lectures, M W 10. Plant Science 37. Laboratory, T W or Th 2–4. Plant Science 15. Professor MACDANIELS.

An elementary course covering the principles and practices of growing ornamental plants in the garden, greenhouse, and home.

2. *INTRODUCTION TO LANDSCAPE DESIGN.* Spring term. Credit three hours. Lecture, M W F 9. Plant Science 233. Associate Professor PORTER.

A consideration of the principles of landscape design as applied to the small-residence property.

5. *FLOWER ARRANGEMENT.* Spring term. Credit two hours. Lecture, T 10. Plant Science 143. Laboratory, W 1.40–4, Th 10–12.30, or F 1.40–4. Plant Science 22. Mr. KEYES.

A study of the principles and methods of arranging flowers and other plant materials for decorative use.

10. *TAXONOMY OF CULTIVATED PLANTS.* Fall term. Credit three hours. Lecture, F 10. Plant Science 22. Laboratory, T Th or W F 1.40–4. Plant Science 22. Assistant Professor LAWRENCE and Mr. CORNMAN.

A study of the kinds of cultivated ferns and seed plants and their classification into genera and families. Emphasis is placed on methods of identification, the preparation and use of analytical keys, the distinguishing characteristics of the families concerned and their importance in ornamental horticulture.

12. *HERBACEOUS PLANT MATERIALS.* Spring term. Credit three hours. Lectures, T Th 8. Plant Science 37. Laboratory, T or Th 1.40–4. Plant Science 15. Professor ————.

A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, use, and culture of spring-flowering bulbs and perennials. The class visits Rochester Parks and gardens in late May.

13. *WOODY-PLANT MATERIALS.* Spring term. Credit four hours. Lectures, T Th 9. Laboratory and field trips, M and W or F 1.40–4. Plant Science 29. Mr. CORNMAN.

A study of the trees, shrubs, and vines used in landscape planting. Emphasis is placed on their characteristics and values for use as landscape material. The class visits Rochester parks and gardens.

114. *TURF.* Spring term. Credit two hours. Lecture, W 11. Laboratory, Th 1.40–4. Plant Science 29. Mr. CORNMAN.

A course dealing chiefly with the principles, practices, and materials for the construction and maintenance of lawn areas. Some attention is given sports turf. A weekend inspection trip is taken to experimental test plots and special turf areas.

115. *PLANT PROPAGATION.* Fall term. Credit three hours. Lectures, T Th 8. Plant Science 37. Laboratory, S 8–10.30 or 10.30–12.50. Greenhouses and nurseries. Assistant Professor ————.

A study of the principles and methods involved in the propagation of woody and herbaceous plants by seeds, division, layers, cuttings, budding, and grafting. The class visits nurseries at Geneva and Newark, New York.

119. *PLANTING AND MAINTENANCE OF ORNAMENTAL PLANTS.* Fall term. Credit three hours. Prerequisite, course 115. Lectures, T Th 9. Plant Science 37. Laboratory, T 1.40–4. Greenhouses, Nurseries, Cornell Plantations. Associate Professor PRIDHAM.

A study of the principles and practices employed in the maintenance of ornamental plants, including the planting, watering, cultivation, pruning, and winter protection of landscape plant materials in garden and park planting. Both woody and herbaceous materials are considered. Trips are made to estate and park plantings.

123. *FLORIST-CROP PRODUCTION.* Fall term. Credit four hours. Lectures and recitations, M W F 9. Plant Science 37. Laboratory, M 1.40–4. Greenhouses. Associate Professor POST.

A comprehensive study of the application of basic science to the culture of ornamental plants, particularly under greenhouse conditions. A trip is taken to greenhouses in Rome and Utica, New York.

124. *COMMERCIAL GREENHOUSE PRODUCTION.* Spring term. Credit three hours. Lectures, M W 9. Plant Science 37. Laboratory, W 1.40–4. Greenhouses. Associate Professor POST.

A course supplementary to course 123 dealing with the commercial production of florist crops; emphasis is upon the practical problems concerned. A trip is made to nearby commercial greenhouses.

125. *FLOWER-STORE MANAGEMENT.* Spring term. Credit two hours. Prerequisite, permission to register. Lecture, M 11. Laboratory, M 1.40–4. Plant Science 22. Assistant Professor FOSSUM.

Lectures devoted to flower-shop management, business methods, merchandising, and marketing of floricultural commodities. Laboratories to include the application of subject matter and the principles of commercial floral arrangement and design. A trip made to New York City at the time of the International Flower Show will include the Flower Show, Retail Florist Establishments, and the New York Flower Market.

32. *ELEMENTARY DESIGN AND PLANTING OF SMALL PROPERTIES.* Fall term. Credit three hours. Lecture, F 9. Plant Science 22. Laboratory, M 1.40–4.30, and three additional hours. Plant Science 433. Associate Professor PORTER and Mr. CADDICK.

The application of the principles of design to the specific problems of the small residence property.

FORESTRY

1. *MANAGEMENT OF FARM WOODLANDS.* Fall term. Credit three hours. Lectures, M W 11. Fernow 122. Laboratory, M 1.40–4. Fernow 206. Professor GUISE.

Principal trees of New York State woodlands, their identification, requirements, and uses; farm woodlands in relation to wood production, soil conservation, and wildlife development; reforestation; development of both natural and planted stands; thinnings and improvement cuttings; protection from grazing, fire, and other injurious agencies; growth and yield of stands; sustained-yield management of woodlands.

METEOROLOGY

1. *ELEMENTARY METEOROLOGY.* Fall or spring term. Credit three hours. Lectures, T Th 11. Plant Science 143. Laboratory, M T W or Th 1.40–4. Plant Science 114. Professor MORDOFF and assistants.

A course designed to acquaint the student with the principles of the general and secondary circulation of the atmosphere; the elements of weather and climate; practical weather forecasting from weather maps and local observations.

PLANT PATHOLOGY

1. *ELEMENTARY PLANT PATHOLOGY.* Fall or spring term. Credit three hours. Lecture, Th 11. Plant Science 336. Practice and conference, any two periods, T W Th F 1.40–4. Plant Science 336, 341, 343, and 362. Professors WELCH and KENT and Associate Professor L. J. TYLER.

An introductory course dealing with the nature, cause, and control of disease in plants. Some of the commoner diseases of cultivated crops are studied in the laboratory.

POMOLOGY

1. *GENERAL POMOLOGY.* Fall or spring term. Credit three hours. Lectures, T Th 8. Plant Science 233. Laboratory, fall term, M or T 1.40–4; spring term, M T W Th or F 1.40–4. Plant Science 107. Associate Professors BOYNTON and SMOCK and Messrs. BEATTIE and McMAHON.

A study of the general principles and practices in pomology and their relation to the underlying sciences; propagation and care of orchard trees and small fruits; harvesting, storing, and marketing fruit; practical work in budding, grafting, pruning, and planting; study of varieties, growth, and fruiting habits.

102. *FRUIT VARIETIES.* Fall term. Credit three hours. S 8–12 and one conference period to be arranged. Associate Professors OBERLE and SLATE and Assistant Professor EINSET.

A systematic study of the most important varieties of apples, pears, peaches, plums, grapes, and small fruits from the standpoint of their identification, growth characters, and special cultural requirements. The development of new varieties by breeding and the methods of testing and evaluating them are discussed. At least one field trip is made.

111. *HANDLING, STORAGE, AND UTILIZATION OF FRUIT.* Fall term. Credit three hours. Lectures, T Th 8. Laboratory, M 1.40–4. Plant Science 107 and the packing house. Associate Professor SMOCK and Mr. McMAHON.

The important factors in harvesting and handling fruit that affect quality and marketability are studied. Emphasis is placed on the practices and problems of handling apples, but the work covers also such fruits as peaches, pears, and grapes, in so far as these are available. The effect of grades and packages on distribution and marketing is fully discussed, with some attention to the problems of market inspection. Consideration is given to the principles and practices of common, cold, and modified air storage, and to the utilization of fruits in the dried, canned, frozen, or juice forms.

112. *ADVANCED LABORATORY COURSE.* Spring term. Credit two hours. S 8–1. Plant Science 107. Extension Professor HOFFMAN, Associate Professor BOYNTON, and Extension Assistant Professor SOUTHWICK.

This course is designed to give more extended practice in the various orchard operations than can be given in course 1. Special attention is given to problems of pruning, tree surgery, orchard-soil selection and management, fruit judging, pollination, and spray practice.

131. *ADVANCED POMOLOGY.* Spring term. Credit four hours. Given in alternate years. Time and place to be arranged. Professor HEINICKE or Extension Professor HOFFMAN.

A comprehensive study of the sources of knowledge and opinion as to practices in pomology. The results of experiences and research pertaining to pomology are dis-

cussed, with special reference to their application in the solution of problems in commercial fruit growing.

POULTRY HUSBANDRY

1. *FARM POULTRY.* Fall term. Credit three hours. Lectures, M W F 10. Rice 300. One recitation period, to be arranged. Rice 305. Professor HALL, assisted by other members of the staff.

A general course dealing with the practical application of the principles of poultry husbandry to general farm conditions.

110. *POULTRY NUTRITION.* Spring term. Credit three hours. Lectures, T Th 9. Laboratory, T 1.40–4. Rice 305. Professor HEUSER.

The principles of poultry nutrition and their application to poultry-feeding management.

20. *POULTRY BREEDS, BREEDING, AND JUDGING.* Fall term. Credit three hours. Lecture or recitation, M W 11. Rice 100. Laboratory, T 1.40–4. Judging Laboratory. Professor HALL.

Selecting and judging birds for production and breed characters; origin, history, and classification of breeds; introduction to breeding. A one-day trip is made to one of the leading poultry shows. Estimated cost for transportation, $5.

30. *INCUBATION AND BROODING.* Spring term. Credit three hours. Lectures, T Th 8. Laboratory, Th or F 1.40–4. Rice 100. Professor BRUCKNER.

Principles and practice of incubation and brooding of domestic and game birds; problems of hatchery management.

50. *MARKET EGGS AND POULTRY.* Spring term. Credit two hours. Lecture, M 10. Laboratory, T 1.40–4. Rice 100. Professor HALL.

A detailed study of the interior and exterior qualities of eggs, abnormalities, egg grades, and standards; practice in candling, grading, and packing. Grades and standards of market poultry; killing, dressing, and packing. General market information.

RURAL EDUCATION

110. *PSYCHOLOGY.* Fall or spring term. Credit three hours. M W F 10. Warren 325. Assistant Professor WOODRUFF.

Designed for students who are not preparing to teach. Consideration of the outstanding psychological concepts that bear upon personal problems and upon business and social relationships.

VEGETABLE CROPS

1. *VEGETABLE CROPS.* Spring term. Credit three hours. Lectures, M W 11. East Roberts 222. Laboratory T or W 1.40–4. Vegetable greenhouses and East Ithaca gardens. Professor WORK.

A general study of the principles of vegetable growing and handling, giving a comprehensive survey of the industry. Intended for the student who desires a brief general course, and as an introductory course for the student who wishes to specialize in commercial vegetable growing. Economic inportance, geography, cultural require-

ments, marketing, storage, and uses of the important vegetables. A one-day trip is required, usually the last Saturday of the term; approximate cost, $3.

2. *SPECIAL CASH CROPS.* Spring term. Credit three hours. Lectures, T Th 10. East Roberts 222. Laboratory, W or Th 1.40–4. East Roberts 223. Professor HARDENBURG.

A study of the major cash-crop vegetables grown in New York, including potatoes, field beans, cabbage, and the important canning crops, peas, tomatoes, sweet corn, and snap beans. About one-half of the term's work is devoted to potatoes. A visit to a nearby bean elevator is required.

112. *GRADING AND HANDLING VEGETABLE CROPS.* Fall term. Credit three hours. Lectures, T Th 8. East Roberts 222. Laboratory, T or W 1.40–4. East Roberts 223, vegetable greenhouses, and East Ithaca gardens. Professor WORK.

Geography of vegetable production and distribution. Factors of environment, culture, and handling as affecting quality, condition, and marketing of vegetable crops. Harvesting, grades and grading, packing, shipping-point and terminal-market inspection, transportation, refrigeration, and storage are discussed with reference to the various crops. A two-day trip is required; maximum cost, $10.

113. *TYPES AND VARIETIES OF VEGETABLES.* Fall term. Credit three hours. Lecture and laboratory, F 1.40–4. East Ithaca Gardens or East Roberts 223. Professor WORK.

Laboratory work preceding the beginning of regular instruction is required, September 16 to 23, 1946. Report at the East Ithaca Gardens at 9 a. m. on September 16. The Department should be notified by September 12 of intention to register in this course.

This course deals with the taxonomy, origin, history, characteristics, adaptation, identification, classification, exhibition, and judging, of kinds and varieties of vegetables; and characteristics, production, and handling of vegetable seeds. The leading varieties of the vegetable crops are grown each year. The value of the course depends to a great extent upon gaining an acquaintance with the plant material as it grows. For this reason part of the laboratory work is done in the gardens prior to the opening of the term.